

WEEKLY EDITION
OF THETHOMAS G. NEWMAN,
EDITOR.

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APICULTURAL NEWS ITEMS.

EDITORIAL AND SELECTED.

Christmas will be here by the time this JOURNAL reaches its subscribers. It wishes "peace and good-will" to ALL—with the usual "compliments of the season."

One More Number will complete the AMERICAN BEE JOURNAL for 1885. Now is the time to renew subscriptions, and send an extra name or two with your own and secure a premium. We have some colored Posters, which we will send FREE, to put up in conspicuous places. We will with pleasure send sample copies to any one who will try to get up a club.

The Weather.—In order to know what the predictions are for weather, we advise our readers to subscribe for *The Future*, published by Prof. C. C. Blake, at Richland, Kans., at \$1.00 a year. He has been remarkably correct in his predictions during the past autumn and early winter.

Mr. O. J. Hetherington, of East Saginaw, Mich., one of the most successful honey-producers of that State, has sent one of his hives to our Museum. The frames may be reversed by an ingenious contrivance of his own. The metal ears are alike on the top and bottom of the frames, and rest on a projecting piece of sheet-iron at the bottom of the hive. The bottom-board is loose, and is held firmly to the body of the hive by Quinby clamps. It also has a movable side, which is also held in place by clamps. It is placed in our Museum to be examined by our visitors.

The Detroit Convention Report occupies nearly all the space in this issue of the BEE JOURNAL. We have now published 47 columns of it. There are about 15 more which we hope to give next week, in order to close it up this year. The essays omitted are mainly those we did not obtain at the Convention, but hope to have copies of them in time for our next issue. We shall then have published over 60 columns (or twenty pages) of the report; the fullest report that has ever been given to the public in any bee-paper in the world. We hope it will be appreciated by our readers, for it certainly was the most enthusiastic Convention ever held in America.

Bees that are Packed in Cellars or winter repositories, says the *Indiana Farmer*, should be kept as quiet as possible at all times. When disturbed in any way, bees fill themselves with honey which has a tendency to create diarrhea. Very great injury may be done by a few careless knocks against the hives. So long as the bees are perfectly quiet, they should be left entirely to themselves, but should they become restless and uneasy they must be put out the first warm day, to have a cleansing flight, and be sure that the colonies occupy the same stands from which they were removed when placed into winter quarters.

Now, while the mind is fresh with the experience of the past, is the best time to lay out the plans for the next season's work. The best results come from the knowledge gained by the experience of the past. A very great trouble with many of us, is that we wait too long with contemplated improvements. Our own experience teaches that the bee-keeper had better be weeks ahead than one day behind. There is no other way to succeed than to be ready at the right time. Plans should be laid now, and gradually worked to completion as the season approaches.

Funny.—The *Detroit Tribune* of Wednesday, Dec. 9, 1885, contains this "funny" item in connection with its report of the Continental Bee-Keepers' Convention:

The Rev. Mr. Langstroth, of Oxford, O., is an old bee-benefactor, having studied their ways to such an extent that he can anticipate their wants. He invented the three-story bee mansion so popular in apiarian circles, in which the bee can retire to his closet when he feels like depositing in his bank without disclosing the size of his roll to envious neighbors. Each bee also has the combination to his own safe, and burglarious drones are often hustled before the queen for punishment for breaking and entering.

Concerning the hall where the Convention was held, it says:

It may be just as well to state right here that an apiary is not a place for keeping apes, but bees. Red Men's Hall, where the Convention met, was filled to the brim with those interested in the small but ambitious bee. The red men were very peaceable, their war whoops hanging on nails about the walls.

Bees and Horticulture.—Mrs. L. Harrison, in the *Prairie Farmer*, remarks thus on the bond of union that should exist between bee-keepers, fruit-growers, horticulturists, etc.

There appears to be a growing antagonism between bee-culturists, horticulturists and stock-raisers. Why should this be? Are they not brethren? And does not the prosperity of one aid in the advancement of the others? The horticulturist may dig, graft, and bud, and what will the returns be without the labors of the bee? The Creator has provided no other means for the fertilization of flowers but the visits of insects, and there are no other insects at this time of year to flit from flower to flower. The body of the honey-bee is wisely adapted to this purpose, being covered with fine hairs, invisible to the naked eye, which brush off and carry the fertilizing powder to the germ that requires it. The fruit sets better, even when the tree has perfect flowers, containing both pistils and stamens, if pollen from another flower, or better still, from another tree, is brushed upon its germ. Who has not observed that a long-continued rain-storm, occurring during fruit bloom, in preventing these little messengers from their rounds, is followed by a failure of fruit?

As a Source of Honey, the goldenrod yields abundantly. It is surprising to think that all about us, in the pastures and by the roadsides, thousands of pounds of a most delicious honey go to waste every year. This plant yields honey in September, after most other honey-plants are sere and dry.—*Lewis-ton, Me., Journal*.

Frank Leslie's Sunday Magazine for January, beginning the Nineteenth Volume, is a brilliant holiday number, abounding in text and pictures appropriate to the season. It opens with an interesting and instructive essay on "Christmas Carols." Dr. Talmage's sermon is on "Christmas in America," and there are several Christmas and New Year's stories and poems, all finely illustrated. Perhaps the article that will attract the most attention is "Prehistoric America," by Rev. Geo. T. Rider, with twenty-two illustrations. There are many short and timely articles, and the full-page pictures are beautiful and numerous. The regular serials, "Love's Harvest," and "Dilettante Days" go on, and the Editorial Departments are full and complete. Published by MRS. FRANK LESLIE, 53, 55, and 57 Park Place, New York city, at 25 cents a number, or \$2.50 a year, postpaid.

Many Thanks are due to our friends for sending us so many new subscribers, when renewing their own subscriptions. The reduced price for 1886 has caused quite "a boom," and is a popular move in every sense of that word. As we do not wish any one to work for nothing, we have concluded to offer premiums for new subscribers for 1886, for in order to compensate for the reduction of our price to \$1.00, we should at least thribble our present subscription list.

For 1 new subscriber for a year (besides your own renewal) we will present you either of the following books—25 cents each.

For 2 new subscribers—any 2 of the books.

For 3 new subscribers—all 3 of them; or the Western World Guide & Hand-book.

For 4 new subscribers—Bees and Honey, (\$1.)

Gaskell's Hand-book of Useful Information—a very handy book of 64 pages.

Architecture Simplified; or, How to Build a Dwelling-house, Barn, etc., giving plans, specifications and cost—60 pages.

Look Within for 5,000 facts which every one wants to know—75 pages.

The Time for Reading has now come. The long winter evenings can be utilized by reading up bee-literature. We have all the newest bee-books and can fill all orders on the day they are received.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so cheap that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with \$4.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.



North American Bee-Keepers' Society.

SECOND DAY—WEDNESDAY.

AFTERNOON SESSION.

The convention was called to order at 2 p.m., Pres. Root in the chair.

Officers were elected, as follows, for the ensuing year:

PRESIDENT—H. D. Cutting, Clinton, Mich.

RECORDING SECRETARY—Frank L. Dougherty, Indianapolis, Ind.

CORRESPONDING SECRETARY—Mrs. Cass Robbins, Indianapolis, Ind.

TREASURER—C. F. Muth, Cincinnati, O.

VICE-PRESIDENTS:

Alabama—Nelson Perkins, Princeton.
 Arkansas—Geo. B. Peters, Peters.
 Arizona—Jas. H. Brown, Prescott.
 British Columbia—U. Spears, New Westminster.
 California—R. Wilkin, San Buenaventura.
 Colorado—Philip Beardon, Jamestown.
 Connecticut—H. L. Jeffrey, Washington Depot.
 District of Columbia—Rev. J. A. Buck, Washington.
 Dakota—J. H. Townley, Ashton.
 Delaware—Geo. Remington, Wilmington.
 Florida—W. S. Hart, Hawk's Park.
 Georgia—Dr. J. P. H. Brown, Augusta.
 Illinois—Mrs. L. Harrison, Peoria.
 Indiana—J. Scholl, Indianapolis.
 Iowa—J. M. Shuck, Des Moines.
 Kansas—Chas. Smith, Marysville.
 Kentucky—J. M. Egbert, Salvisa.
 Louisiana—P. L. Vialon, Bayou Goula.
 Maine—J. B. Mann, Mechanic Falls.
 Manitoba—Hon. J. H. Wallbridge, Winnipeg.
 Massachusetts—S. M. Locke, Wenham.
 Michigan—Miss Lucy Wilkins, Farwell.
 Missouri—E. M. Hayhurst, Kansas City.
 Mississippi—Dr. O. M. Blanton, Greenville.
 Minnesota—C. F. Greening, Grand Meadow.
 Maryland—Dr. W. G. Phelps, Galena.
 Montana—Chas. Bruce, Wickes.
 Nebraska—T. L. VonDorn, Omaha.
 Nevada—A. A. Leeper, Carson City.
 New Jersey—E. Terryberry, Highbridge.
 New York—Ira Barber, DeKalb Junction.
 North Carolina—H. H. Watson, Sladesville.
 Nova Scotia—C. T. Jones, Waterville.
 New Hampshire—M. Harie, Kenos.
 Ohio—A. L. Root, Medina.
 Ontario—J. B. Hall, Woodstock.
 Pennsylvania—Arthur Todd, Germantown.
 Prince Edw. Island—Jas. Gouarie, Summerside.
 Quebec—H. F. Hunt, Quebec.
 Rhode Island—Wm. J. Tracy, Burrillville.
 South Carolina—S. C. Boylston, Charleston.
 Tennessee—W. P. Henderson, Murfreesboro.
 Texas—W. H. Andrews, McKinney.
 Utah—John Morgan, Salt Lake City.
 Virginia—J. W. Porter, Charlottesville.
 Vermont—A. E. Manum, Bristol.
 West Virginia—A. W. Cheney, Kanawha, Falls.
 Wisconsin—Christopher Grimm, Jefferson.
 Wyoming—James Fields, Fort Laramie.
 Washington—H. A. Marsh, Fidalgo.

[As a mistake was made in one of the names last week, we republish all of them.—Ed.]

A letter read by Mrs. L. Harrison, from Mrs. Sarah J. Axtell, Roseville, Ill., conveying her salutations to the Society, and detailing her experience as a bee-keeper, was referred to the committee on resolutions.

An essay on "Selling and shipping bees by the pound," by Mr. E. M. Hayhurst, of Kansas City, Mo., was read.

A. I. Root—I do not think the letter extravagant; such reports are quite frequent. The original half-pound of bees that Mr. Hayhurst sent me was put upon combs, and made so strong a colony that it was, I believe, divided in the fall. We must have young bees, and the bee-keeper must be an expert. Mr. Root then described what could be done in a single season with a half-pound of bees and a fertile queen in May.

There was general concurrence in the utility and convenience of selling bees by the pound.

Mr. A. I. Root, of Medina, O., then read the following on

EXCELLENCE OF CHEAPNESS—WHICH?

I do not know but that this subject was given me because some of the brethren think I have been a little too eager to recommend cheap tools and appliances; and may be they thought I would defend my side of the subject while somebody else would take up excellence rather than cheapness. Now, it seems to me that wisdom and experience should guide us in this matter, and that we cannot very well lay down general rules for purchasing bee-supplies, or for purchasing anything else, in fact. Isaiah tells us, in his first chapter, to "learn to do well;" that is, doing well is progressive; and I should also say, learn to purchase wisely. If you have a little money that you want to invest in bee-supplies, do not be in a hurry to get rid of it all. It is said that "through wisdom is a house builded;" and I should say, "through wisdom" we make prudent purchases.

Suppose a boy is large enough to need a knife. What kind of a knife should he purchase—a five-cent knife or a two-dollar knife? Why, I should say it depends upon who the boy is, his age, and what he wants to do with the knife. But with the average boy, I think it would be a pretty good idea to try the cheap knife first. Even if he has laid up a couple of dollars to buy a pocket-knife, I think he will get more satisfaction by trying a cheap one first than by trying the two-dollar one first. If the cheap one does not please him, nor answer his requirements, it would not be very much expense to give it to some other boy, and try a little better one. Let him carefully examine and test each knife he buys, until he becomes a tolerably good judge of knives, and is able to purchase understandingly.

There are a great many people—and good people too—who have a way of saying, in regard to every purchase that comes up, "The best is the cheapest." A good deal depends upon what you mean by *best*. Suppose you want a hammer. There are hammers in the market for only five cents. They are not loose nor rickety either, for they are made all of one piece of iron; and although they may be awkward and cheap-looking, they will do a vast amount of service for many kinds of work. They cost so little that if somebody borrows one, or loses it, it does not matter much; and I have found it quite convenient to have these cheap hammers scattered all around the premises. We have one down in the barn, and one in the stable out in the lots. The children have them to crack nuts; and, in fact, their are so many of them on the premises that whenever you want some sort of hammer for just a minute, you can almost always get hold of one of these, without going a great way or hunting very long.

But, do you think I would give a good mechanic such a hammer to put

up hives with? By no means. In putting up hives he uses a hammer almost constantly; and if I could find a hammer *worth* five dollars, I would give it to him without hesitation; for if it were worth only a cent a day to him more than a cheap hammer, it would soon pay for itself. For this same reason a good mechanic ought to have at least three hammers, and three good ones. Now, when I say I would give a hammer worth five dollars if I could find it, I do not mean that I would buy one that is silver-plated, or has inlaid work in the handle, and things of that sort; neither would I give him a hammer that had a great amount of unimportant work put on it. One of our large railroad companies paid \$60 (I think it was) for a dozen hammers to be used by some of their expensive men. These hammers were all worked out by hand, and were very handsomely made. I do not believe it will pay many bee-keepers to use tools or appliances made in this way. When he becomes so well off in producing honey and bees that he has some money he really does not know what to do with (I wonder if there are any such here to-day), it may be just the thing for him to do, to buy a six-dollar hammer to make hives with, because, you know, "the best is always the cheapest."

Suppose somebody of limited means wants to try bee-keeping. What kind of a colony of bees should he buy? Without knowing anything about the general habits of the man or woman, I would say, let them get the cheapest colony of bees that could be found in the neighborhood, thus saving expensive transportation charges, and also making their purchases of friends and neighbors. Then I would advise getting an Italian queen; but as I have said before, if one is new at the business, and, may be, likely to make blunders at first, I would tell him to get an untested queen. After he introduces her all right, and she begins to lay, if she does not turn out well in every way, let him try a higher-priced one next time, working progressively; and my experience convinces me that the best way in the world to get anything of this kind is to get it progressively. *Learn* to do well, not undertake to come up to the highest standard all at once. There is far more enjoyment in making a little more improvement every day, than in stepping into great things, even if it could be done. The same with hives, I would first get a cheap hive. When winter comes, get a hive suitable for winter, even if it does cost a little more; but save the old hive for the increase when spring comes again.

If you are going to make hives, start out with few tools and purchase judiciously each season, as you find you really need to. Do not get anything to be put away on the shelves until you may need it. Purchase what you need, and no more, until you have pretty surely demonstrated that it would be prudence to purchase larger lots for the sake of getting better prices. If you have worked with comb foundation enough to

know that you want to use it largely, you can, from past experience, usually figure out how many colonies you will need to have, to think of buying a foundation machine.

There is another point to be considered right here. Sometimes cheap tools and cheap machinery make us so much bother and worry that they spoil all the pleasure of trying to keep bees; whereas a high-priced tool or a high-priced machine would go right along, without any hitch or accident, in such a way that the work would be only pastime or "fun." Where one's time is valuable, or where he already has many cares and responsibilities, nice tools or nice machinery, all in perfect working order, is by all means the most satisfactory, and, I believe, the most profitable. This latter point comes in more with tools or machinery that is necessarily somewhat complicated. We had some experience in this line in making and sending out rubber plates for making foundation. While we made the machines work nicely in the factory, and while a few of our customers were pleased with them, the majority found there were so many conditions to be observed, and the whole arrangement was so uncertain in its results, that I have always regretted that I advised anything of the sort. The same remarks will apply with force to home-made honey-extractors. We have for years sold the inside work, so that the friends who wanted to economize could save something by attaching them to an ordinary tin-can or barrel; but as a rule, I believe they found it more vexation of spirit, and perhaps more expense in the end, than to have purchased an extractor all ready for use. Where one has a great many bees, and a good market for extracted honey, perhaps an automatic extractor will be found to be cheaper than any other.

In regard to bee-feeders: My experience has been in favor of something very plain and simple. One of our bee-friends once made a remark in jest in one of the bee-papers, that every bee-feeder and bee-hive, according to his notion, ought to have "cog-wheels," slides, and levers, somewhere about them. Now, "cog-wheels" work very nicely in a warm room on a winter's day; but when you get out in the apiary, among the bees, about harvest time, when everything is crowding, these cog-wheels seem to be somehow out of place. Let us have our implements plain, simple, and substantial; let us pay enough for them to have everything exactly as it should be—hives and frames interchangeable—everything so that it will work easily and surely; no sticking, nor jamming, nor pounding, to get things in place.

In regard to utensils for honey: I believe the demand seems to be in favor of cheapness—tin pails that are to be given away, as well as crates to hold comb honey. Sell the honey for so much, package and all. But even though we give them away, let us have them well enough made to be sure there will be no leaking nor daubing.

In regard to honey-knives: I would advise, as I advised the boy with his first pocket-knife. If you have few bees, and do not expect to go into the business largely, you can make a 10-cent garden-trowel do your uncapping very well for quite a while. When you need a better uncapping-knife, get it.

In regard to perforated zinc and things of this sort, do not include any in your first purchase. Wait until you feel the need of such new implements. May be you will never need them at all.

Even though I advise economy in purchases, I would have everything painted that stands out in the weather. If you say you cannot afford it, I would have half the number of hives, and have them protected from the weather by paint, rather than increase so fast, and have the weather constantly spoiling my implements. Besides, I would pay something for the sake of having things look decent and in order. A great many times, nice-looking implements encourage us to renewed energy; and sometimes just a little extra energy makes all the difference between success and failure, or profit and loss.

Every man who has honey to sell ought to have some sort of scales to weigh it on. The family steelyards will do to start with; but whenever you begin to take time enough in the course of a year, in using steelyards, to pay for a pair of scales, get the scales, but do not get them sooner, if you are cramped for means. When your business increases so that it will pay to have still better scales, get them. Do not waste the price of a good article in bothering with a poor, cheap one.

In regard to seeds for honey-plants: Go slow, unless, indeed, you are a farmer, and can raise Alsike, buck-wheat, rape, or raspberries, so as to make it a paying investment aside from the honey. If you can do that, by all means raise honey-plants. I am led to make these remarks, because some of the new bee-friends seem to think that the first thing to be done in starting in bee-culture is to get a pound of flgwort seed, and 4 or 5 pounds of the spider-plant, just because these plants yield honey in such quantities as to be visible to the naked eye. Buy a five-cent package of these seeds first; and if they please you, plant more the next year, by which time you should have seed of your own raising.

In regard to sections for comb honey: As the appearance of this product has a great deal to do with the price obtained, I think it very likely that the best is the cheapest every time.

When you find that you need a smoker (and you may need it the first day you can call yourself the owner of a small colony of bees), I should say, try a cheap one to start with. But perhaps you can decide what you want before you buy, by examining them at conventions, or testing those used by your neighbors. I say this, taking it for granted that bee-keepers are always neighborly. Is it not so?

In regard to hiving-boxes: I have sometime thought I would about as soon have a half-bushel or peck basket fixed to a pole, as to have any of those in the market. May be, after having tried them, though, you will think differently.

When your business arrives to the dignity of requiring a steam-engine, it will pay you to look into the matter very carefully. If you can, go and see the engines made near you. But as I said before, be sure you need one before you get it. If you are doing your own work, decide how cheaply you can afford to furnish power by treading a foot-power machine. Whenever an engine would save you \$25 a year for power, if you can raise the money to buy it, without cramping yourself, buy one of 1 or 2 horse-power. When you need a larger one, you can, as a general thing, dispose of the smaller one, or turn it toward another one as part payment.

While some folks get along nicely without any bee-veil at all, others save time and save their nerves, by using veils. The same may be said in regard to gloves, although for myself I should certainly never use the latter among bees; and if I had the entire management of an apiary, I do not think I should ever need a veil. Cheap, home-made veils will answer a very good purpose; but there are no gloves that will do, except the regular rubber gloves made for the purpose.

Prudence and economy would dictate some sort of wax-extractor. But do not buy one until you have discovered you need one. If you commence on a small scale, as you by all means should do, I would get a cheap one first.

Now I am going to talk a little on the subject of taking care of tools, even if that subject was not assigned me.

A cheap, low-priced tool may be so well cared for that it will always give excellent results; whereas, the most expensive tool may be so badly used that it will very soon give poor results. Have for your tools regularly assigned places. Where any tool is wanted in different places, I would have duplicates. For instance, cheap brushes for brushing off bees should be in handy places in the honey-house, and in several places about the apiary, at least during the summer time. The same may be said of hammers. Do not leave any kind of tool out in the rain. Keep every kind of tool not only well oiled on the moving parts, but oil it to prevent rust. Oil the hinges to the door of your honey-house. Rub tallow on the windows so they will slide easily up and down. Keep your lawn-mower nicely oiled, and out of the rain. Have your brooms hung up in broom-holders so the ends will not get rolled up and made useless; and keep the brooms out of the rain also. If you use a wrench, keep it nicely oiled and in place. And this matter of oil is of so much importance that I would have cheap oil-cans filled with oil, on nice little bracket shelves in the barn and in the stables. A little box should also be there, filled with tallow,

where it can be had in a moment. A great many times the oil-can or the tallow will enable you to use a hand-saw so as to do the work in half the time it would if you had not used it. With steam-engines, and machinery for hive-making, oil is a necessity; and those who neglect to have it handy, will sooner or later have to pay heavy bills for repairs that a few drops of oil might have saved.

Nails and screws of different sizes should also be kept where you can put your hand on them quickly. Whether you are a bee-keeper or not, you need screw-drivers and adjustable wrenches where any of the children can get them in an instant, if you tell them the tools are wanted in a hurry. And, my friends, as you value the future happiness and comfort of those children, teach them to be sure these things are put back in their places as soon as you are done using them, if you should forget it yourself. A girl five years old can easily save the time of a man and a team, may be, by knowing where to find a wrench or an oil-can; and the little girl will get it, and put it back, quicker than a big man could. That is one reason why I like little girls, and little boys too, because they can help such a "big lot," when they get into the way of helping, and when their papas make friends with them. I wonder how many of the papas to whom I am talking to-day are in the habit of making friends with the "little chicks" at home. Why, if you do not, you lose half the pleasure of success in business. When a big crop of honey comes, and the prospect is before you of being able to pay off debts that have worried you, what a rare pleasure it is to be able to tell the children about it when you tell mamma, and have them rejoice and clap their hands too!

Mrs. Harrison referred to a remark made in Mr. Root's essay, on wearing gloves when handling bees. She found that gloves were necessary, but rubber ones did not work well, they were too close, and caused inconvenient sweating. She used a species of fine cloth. She cuts the tips of the fingers off, which allows the perspiration to escape, and makes them more comfortable and durable.

Rev. W. F. Clarke said that rubber gloves did not last long, the honey and propolis soon rot the material. He had experimented largely with gloves, and preferred two kinds, the one a harvest glove, largely used in Canada, and made of sheep-skin; these were very cheap, costing from 30 to 40 cents. But he preferred a glove, or rather a gauntlet, made of two separate materials—the inside a species of Canton flannel, a fluffy material, and the outside, a species of fine linen, very glossy. Such a glove is thick enough to prevent the point of the sting reaching the flesh, and the beauty of it is that when these gloves are on you can dip your hands in water which keeps you cool, and causes the bees to fly as soon as they alight on the glove, for they are dainty and do not like to wet their feet.

Mrs. Harrison—I do not think that the lining is needed.

J. B. Hall—Wear smooth clothing, singe the hairs from the hands and wrists, and but few stings will be received.

Rev. L. L. Langstroth—Bees dislike to alight upon a cold surface; have dishes of ice water in the yard, and occasionally plunge the hands into the water when the bees are cross.

Prof. Cook—I think that a nervous, irritable person may be more likely to be stung; aside from this, I do not think that bees are any "respecters of persons." I question if sweat of horses is objectionable to bees. If a horse is severely stung, cover it with blankets wet with cold water.

Mrs. Temple, of Michigan, said that she could handle bees any way she wished, and they scarcely ever stung her. When they did, she suffered no particular inconvenience. She did not mind a bee-sting more than a mosquito-sting.

Mr. Heddon was in favor of wearing veils, but would not recommend gloves. They were very much in the way. He did not think there was the difference in people that Mr. Clarke would make out, some being bee-loved and others bee-hated. He thought that the difference was only in the actions and behavior of people when among bees.

G. M. Doolittle was satisfied that there was a real difference in different persons as to liability to being stung. He had a visit from a gentleman who said that bees never stung him, and Mr. D. acted so as to irritate the bees. They stung him (Mr. D.) very freely, but never touched the visitor.

James Heddon—I have seen nothing to indicate that bees are more likely to sting one person than another.

Rev. L. L. Langstroth said that the poison of a bee-sting was very virulent in the case of some, while others did not mind it at all. At one time of his life he was very susceptible to bee-virus, and, dreaded being stung; but, after having been laid aside from bee-keeping for some time, and cautiously resuming, he found to his great surprise and pleasure that he had become so inoculated with the poison that he scarcely felt any pain whatever.

Mr. Boardman brought up another point in the essay—"Excellence or Cheapness"—as it respects section-boxes. He said that much might be done to preserve our honey-flora, by using something else than basswood for sections. He never uses basswood; honey stains it, so does water.

J. B. Hall—I use and prefer white spruce. It is hard, and the honey does not soak into it.

James Heddon—I do not use basswood.

Rev. L. L. Langstroth—Upon the subject of the essay read, I would say that excellency is cheapness.

Mr. John Vandervort, of Laceyville, Pa., then read the following on

COMB FOUNDATION.

To go back to the origin of comb foundation and trace its history would be a waste of time in repeating

what is familiar to all practical bee-keepers. The best and most practical use of foundation is what we need to know. By the use of wired frames for the brood-chamber, I have obtained better results from foundation 6 square feet per pound than I formerly did with 3 square feet to the pound.

There has been a great deal said and written on the different kinds of foundation, and many tests have been made that, in my opinion, proved nothing. I have made mills of every style in the market (except the Pelham); I have made foundation on them; and I have tested all the different styles of foundation in the hives, and even my bees would not give my pet theories any preference, so far as acceptance was concerned. When it was all made at one time, from the same lot of wax, and used at the same time, it would all be accepted alike; but if made of different lots of wax, and at different times, they would show a decided preference for the purest and softest wax, and the newest made.

My experience in the use of comb foundation for surplus differs from many, in the amount of wax that should be used. Many claim that 8 to 10 square feet to the pound is light enough; but I contend that it should not be heavier than 12 square feet per pound. Comb drawn from foundation is much tougher than the natural comb, and for this reason we should use as little wax as possible in the surplus honey. I find by repeated experiments that I can get as much honey from the light as from the heavy foundation, and I receive no complaints from my customers about "fish-bone."

D. A. Jones—I have had "fish-bone" in one part of a case and not in another. One trouble is, the sections are put on too soon, and the bees run over the foundation, and "fool" with it, and it becomes hard before they attempt to draw it out.

Thos. Pierce—I agree with Mr. Jones.

Geo. E. Hilton—I also agree, and would further say that when only a "starter" is used, I am more apt to find "fish-bone" in the upper part of the section, which does not occur when the section is filled full of foundation.

N. W. McLain asked, "What shall we do with old foundation?"

J. C. Van Deusen—Melt it up and make it over; or if you do not wish to do this, soak it in warm water before using it.

C. P. Dadant—I have used foundation 3 years old in the brood-nest, and could see no difference between it and new foundation. If placed outside the brood-nest, or where the bees do not cluster upon it readily, it will probably not be used so soon as would new.

Dr. A. B. Mason—I agree with Mr. Dadant.

A. E. Manum—I have tried foundation of different ages, from one year to five years old, and could see no difference.

C. P. Dadant—When we first give foundation to the bees, the new may be used first a short time, but as soon as the foundation is warmed up there will be no difference.

D. A. Jones—If foundation is kept for several years it will acquire a bluish color; if it is put into warm water (say 120°), it will lose this bluish cast and become soft and pliable like new foundation.

W. E. Clark—I have kept foundation in a hive for 5 years, then hived a swarm upon it, putting in some sheets of new foundation, and both old and new were worked alike.

J. Vandervort—Thin foundation can be made upon a mill for making heavy foundation, but I find it better to sheet the wax thin. My objection to a press is that it cannot make thin foundation unless it is sheeted thin.

James Heddon—I think there is quite a point in regard to whether foundation is exposed to the air, or kept closely boxed, as regards its being soft and pliable when old. Everything considered, I prefer new foundation. Bee-keepers themselves are to blame for all this talk about "fish-bone." I used foundation for 3 years before my honey-customers knew it, and only one ever noticed it. Foundation was then much heavier than now.

The convention then adjourned until 7:30 p.m.

EVENING SESSION.

The meeting was called to order at 7:30 p.m., President Cutting in the chair. Dr. C. C. Miller's essay was read by the Secretary, entitled

BEE-KEEPING AS A BUSINESS.

In the *Canadian Bee Journal* for November, 1885, the question is asked, "Charging for salaries for work done, for necessary expenses, and for depreciation in the value of accessories, does bee-keeping pay?" Replies are given by 19 bee-keepers. Of these, 3 are non-committal; 8 say "yes, if the business is rightly managed;" I think it will pay if the person is adapted to the business, if compared with other rural pursuits; 4 give a more or less decided "no;" and 3 give just as decided a "yes." This leaves the question about as unsettled as ever, and it is evident from a close scrutiny of the answers, that in the minds of some of the respondents at least, that the question was looked upon in rather a loose way without considering the limitations put upon it by the querist.

As I have been asked to open the discussion of this subject before the North American Bee-Keepers' Society, it may be well to try to get at the exact matter to be discussed; and in order to do this, it may be necessary to ask, what is the object of the discussion? that is, what good is to come of it? I am not sure that I know, unless it be to answer the question for that class of persons who are trying to decide whether to adopt bee-keeping as a means of livelihood. In that view of the case the question might be something like this: Can I make as much money in a series of

years, at bee-keeping, as I can at any other business? The more I think about it, the more difficult it seems to me to give an answer that will meet all cases, and perhaps the only safe one is this: "I can't tell. You must try it and find out." But as the question is asked in good faith, some discussion may help.

It will hardly do to attempt a general answer, as too many do, by quoting the results of a successful year by a skillful man, saying "Mr. A. made \$3,000 clear, such a year." If Mr. A. had business ability by which he could make \$4,000 a year at some other business, then for him bee-keeping did not pay. If Mr. B. can average \$500 a year keeping bees, and there is no other business at which he can make more than \$400 a year, then for him bee-keeping pays well.

Perhaps one of the best ways to get the desired information, is to ask those who have had experience in the matter. We will interview Mr. C., a bee-keeper of some note. In reply to our query, Mr. C. says:

"Oh yes, bee-keeping pays well. Adam Grimm made a fortune at it."

"What has been your own experience in the matter, Mr. C.?"

"Oh, I only keep bees as a matter of recreation. I had, one year, over 40 colonies, but my time is so much taken up with professional duties that I only keep about a dozen. I have kept a cash account with them, and find they pay me well."

"Why don't you keep a larger number, or devote your entire time to it?"

"Oh, I couldn't afford that. You see I can make so much more as a lawyer. But then there are thousands of men who only earn say \$400 a year, who would be greatly bettered by taking up bee-keeping as an occupation. I can easily clear annually \$5 per colony. Now one of the men I have spoken of, with 100 colonies could make at that rate \$500 per year, so, you see, he would have his condition bettered \$100 per annum."

"But, Mr. C., have those men the ability to do as well as you?"

"Well, I don't know. It's hard to tell."

But I was only to open this discussion, and I suppose it may now be considered open. I may just add a word from my own experience. I have been in the business some 24 years, making it my sole business for the last 7 years. I have no patent hive to sell, do not sell bees or queens—simply produce honey to sell, and I am obliged to confess that I could make more money to give up bees entirely. If asked why I continue at the business, I answer: I like it. It keeps me out-doors, and is good for health. It allows me to be with my family more than any other calling at which I could make as much, and for the privilege of these enjoyments I am willing to pay the price of the additional money I would make at a more lucrative calling. Whether the price may not become too large for me to afford to pay, is an open question.

A. I. Root—I think that none of our bee-periodicals now advise everybody to keep bees. Dr. Miller should have mentioned that he was receiving a large salary when he embarked in bee-keeping. He has frequently told me how he enjoyed bee-keeping. If it brought him health, what more could he ask?

S. T. Pettit—Mr. Root's speech is a sample of showing the bright side, and leads us to think that there is nothing like bee-keeping for health.

J. B. Hall—Editors like to tell good news; if I tell how much honey I produce, the bee-papers publish it, the newspapers take it up and spread the story all over the world, and everybody thinks that "if he can make money in producing honey, I know I can." I know of many people who have engaged in the business and lost money at it.

Thos. G. Newman—Editors publish just what bee-keepers write them for publication, and try to fairly represent the pursuit. At least, I know that is the case with the AMERICAN BEE JOURNAL.

Martin Emigh, of Holbrook, Ont., was called upon and asked if he had made bee-keeping pay. In reply he said that he had paid for his farm out of the proceeds of his bees. Last year he put 180 colonies in cellars and took out 178 alive; sold 71 colonies; and now has 177 colonies, and they produced 6000 lbs. of comb honey and 5000 lbs. of extracted honey.

H. R. Boardman asked all those who made an exclusive business of bee-keeping to raise their hands. A very animated discussion arose as to who did make bee-keeping an exclusive business, and some exceedingly fine points were raised, when further discussion was stopped by a motion to lay the subject on the table, which was carried.

Mr. Nelson W. McLain, manager of the Experimental Station of the U. S. Agricultural Department, at Aurora, Ills., read from the advance sheets of his forthcoming report to Prof. C. V. Riley, U. S. Entomologist; but he requested that what he read should not be reported, because it had not yet been published by the Department, and it was only by the courtesy of the Agricultural Department that he had been permitted to present it to this Continental Society of Bee-Keepers. He assured them that each one of the bee-periodicals would be furnished with proof-sheets in time so that they could publish the matter simultaneously with Prof. Riley's forthcoming report. The subjects treated upon were, "Bees and Fruit" and "Artificial Fecundation of Queens." The report detailed the results of investigations and experiments carried on by him at the Government's Experimental Station. It demonstrated that the bees cannot injure fruit; and gave the account of several experiments in fecundating queens artificially.

At the close of Mr. McLain's remarks, the Rev. L. L. Langstroth offered the following resolution which was unanimously carried:

Resolved, That this Society highly appreciates the movement now at

length made by the United States Department of Agriculture, in the promotion of bee-culture, and welcomes its representative, Mr. Nelson W. McLain, to whose explanatory address and the extracts from his forthcoming report the Society has listened with much interest, especially concurring in the suggestion that statistics of the honey crop be included in the report of the Department.

A. J. Cook—People have several times told me that their grapes had been destroyed by bees, and I have offered to come and see the destruction, if they would let me know when it was going on, but I cautioned them to first be sure that they had a case. I have never yet been called. Bees do sometimes attack grapes, however, but it is when the weather has first caused them to crack, or something else attacked and opened the skins. I cannot believe that queens can be fecundated while in the larval state.

N. W. McLain—When I gave to Prof. Riley an account of my experiments in fertilizing queens in the larval state, he said that it was nothing strange; it had been frequently done with other insects. By exercising the laws of breeding, different varieties of bees can be crossed, the undesirable qualities eliminated, the good qualities preserved and so intensified that we really have a new strain of bees that will transmit their characteristics.

James Heddon—Have you the temerity to tell me that I can cross the Italian and German bees, and secure a cross possessing the good qualities of both varieties?

N. W. McLain.—Most assuredly.

Mr. Heddon then gave a history of how his strain of bees were originated. In regard to bees being trespassers, he said that people do not look at the matter in its true light. In some localities cows are allowed to run at large; what would be said of the land owner who would put poison into a pumpkin, saying, "It is my poison, my pumpkins, and my land, I can do with them as I please, let people take care of their cows if they don't want them poisoned?" There is as much sense in saying that bees must be kept at home. All bee-keepers should join the Union, and thus help to have bee-keeping recognized as a legitimate industry.

N. W. McLain detailed in graphic language the treatment to which honey was subjected at the hands of commission men. The remedy is to let people know that you have pure honey for sale. If bee-keepers would take one-fourth the pains that patent medicine men do to advertise, there would now be no complaint of a poor honey market.

The convention adjourned until 9 a.m. of the next day.

THIRD DAY—THURSDAY.

MORNING SESSION.

The meeting was called to order at 9 a.m., Pres. Cutting in the chair.

It was moved and carried that the Secretary be paid \$50 to pay for his expenses and services.

The President called on Mr. T. G. Newman for a report on "Apicultural Necrology."

[This is omitted for want of room; it will appear next week.—ED.]

Prof. Cook remarked that he was very much interested in the subject, and remembered with pleasure many meetings when those mentioned by Mr. Newman had been present. He spoke particularly of Mr. Moon, the original projector of the National Society, and Mr. Williamson, who so nobly managed the entertainment of the Society at Lexington, Ky. He moved a vote of thanks to Mr. Newman for placing their names and history before the Society, and also that it be spread upon the minutes. Carried unanimously.

Mr. James Heddon then read the following on

REVERSING COMBS.

My experience with reversing brood and surplus combs is nearly all confined to two seasons; but as I have had in use 4,000 to 6,000 reversible brood-frames, as well as quite a number of reversible comb-honey-cases, that experience has been somewhat comprehensive. I try to be practical in all my work, never jumping hastily at conclusions, nor adopting methods and fixtures which, although of some little advantage, still are not enough to over-balance the extra cost of construction and manipulation. Despite such endeavors I realize that it is by no means impossible for me to make mistakes, yet I feel quite positive that implements arranged for reversing brood and surplus combs at will, have come to me to stay.

During the past year I have been using a hive which I devised for the purpose, with which I can reverse, or more properly, invert a whole case of brood or surplus combs at will. While we all, here, consider this a great improvement over reversing combs singly, yet were I to continue the use of such hives as necessitated reversing each brood-comb separately, I feel positive that I never should again use a frame that would not admit of reversing.

Some of our bee-keepers have paused to ask if there was not some serious objection to inverting combs. They had noticed that the cells were slightly inclined; that the workers nearly always built them in this way; and they believed that behind this almost universal method of comb-construction, was a design for a purpose. Even if this be true (which I doubt), is it not quite evident that the designers are not aiming at our desired end; that they do not purpose "lots of surplus honey to sell."

Let us not forget that our bees always and invariably construct their combs so that the cells are in rows horizontally—not vertically. This is an unvarying rule, while the incline of the cell is not. Now, I found that by the use of comb foundation, I could make them construct their combs with the cells running in rows vertically. Much of Dadant's excellent brood foundation is stamped in

this way. Many believe that it is less inclined to sag, when so placed in frames. I have found by practical use of thousands of pounds of it, that the little worker, in so rigidly following her instinct in rowing the cells horizontally, was only "just trying to fool somebody." By the inversion of thousands of combs, I have proven that her less determination to incline her cells, belongs in the same catalogue with placing the same in horizontal rows. I think that the scientist has long since learned that Nature, when forming instinct in animals, is no more working for our interests than when she pours her rain-water back into the sea, while our crops are blasting and withering; or when she visits us with cyclones.

I know it is true that we cannot with impunity violate some of the instincts of our bees; that some of them run directly parallel with the ends we desire; but which are for and which against us, we must determine by experiment. I have satisfied myself that in the inversion of combs we violate no instinct which is favorable to our success. We do, however, encourage certain actions on the part of our bees, that greatly favor the desired result.

By virtue of this reversing we get our frames completely and solidly filled with comb, which metes out to us no less than six points of advantage which I will not consume space to detail. It also tends to keep the brood-combs the more completely filled with brood, the honey going into the surplus combs. When reversing is practiced, as we can well afford to do when we can reverse a whole set of combs with a single motion, it gives us great control over swarming. I find that the reversing of the surplus combs after I have learned the proper time to do it, is conducive of most favorable results. It causes the bees to more completely fill the sections, which is not only an economy, besides presenting a more attractive package, but adds greatly to the shipping-qualities of our surplus comb honey. It also stimulates hasty and complete capping of the combs.

During my experience in reversing combs, I have never yet discovered any ill-effects resulting therefrom; but besides the advantages above enumerated, I am always meeting with unexpected minor benefits resulting from the practice.

Dr. A. B. Mason—When is the proper time to reverse the combs?

James Heddon—The proper time to reverse brood-combs is when the bees are rearing large quantities of brood, and desire to increase the size of the brood nest. To reverse the brood-combs late in the season, when they are contracting the brood-nest, will cause the brood-nest to be filled with honey all the faster. Sections should be reversed when the bees are inclined to store honey in them; if done after the bees cease storing honey in them, it will hasten the removal of the honey to the brood-nest. As soon as the outside sections are

far enough advanced to bear inversion, change them to the centre of the case, then invert the whole case, and all the sections will be finished at nearly the same time. Inversion causes the bees to attach the combs to the sections all around, and thus makes them bear shipment much better. Swarming is also lessened by reversing the combs, as the removal of the honey gives more room for brood, and thus helps to destroy the desire for swarming. It also has a tendency to the destruction of queen-cells.

C. P. Dadant—How about contraction?

James Heddon—My objection to the Langstroth hive is its depth; with that I contracted by removing some of the combs and putting in "dummies." With my new hive I contract by simply taking away one section of brood-frames.

Mr. Thompson, of New York—How shall those manage your new hive that do not wish to feed sugar for winter stores?

James Heddon—During basswood the bees can gather honey faster than they can store it in the sections, and we have only to place a section of brood-combs over the sections, and in this catch the "overflow." When the harvest is over, remove this and keep it until fall, then shake the bees down in front of this case of honey, or else set it over the case containing the bees, and it is done.

Geo. E. Hilton—In practicing the contraction method, how can we remove a section of the brood-nest after swarming without removing some of the brood?

W. Z. Hutchinson—After a swarm has issued, the young queen does not commence laying until about the 19th day, two or three days later all the brood will have hatched, and we can remove one section without taking any brood; we may get a few eggs, but this is immaterial.

L. C. Root—Are we to understand that you prefer brood-combs only 5 inches deep?

Mr. Hutchinson—Most emphatically.

C. P. Dadant—We object to a shallow comb, and to two sets of combs, because the queen cannot lay in a circle; it consumes time for her to pass from comb to comb, or from one end of a shallow frame to the other.

W. Z. Hutchinson—We do not care how the queen travels, whether in a circle or crosslots, if she only keeps the combs full of brood, and if we do not give her too many combs to fill, she will do this.

Prof. A. J. Cook then read an essay on the Pollen Theory. It was a scientific dissertation on the nature of different food elements, and the process of digestion. The upshot of it was that bees during their long winter imprisonment should not have nitrogenous food, as it rendered them uneasy, and necessitated exertion. The Professor's paper was an argument in favor of what is known as the pollen theory, from a chemical stand-point.

C. P. Dadant—We once imported bees largely, and by long experience

learned that the food must contain no pollen; if it did, the bees died.

James Heddon—I have found bees frozen upon combs of honey—frozen before they had consumed enough pollen or bee-bread to produce diarrhea. I have used the term "heat-producing food" in the sense in which it is generally used. I know that a stage driver in cold weather needs food of a different character than does a wood-chopper.

Prof. Cook—The chemist speaks of heat-producing food; the physiologist does not. I think it an improper term.

Mr. Ira Barber's essay was read by the Secretary, on

WINTERING BEES IN CELLARS.

Another year has passed since we met together in council, and thousands of colonies of bees have been lost for want of proper protection in winter. It is quite often said that no one has learned the secret of wintering bees, so that they can be wintered safely every time; but I deny the assertion, and ask this association of bee-keepers if a quarter of a century of successful wintering of hundreds of colonies of bees without loss, except where an occasional one starves, is not long enough to establish the fact that bees can be wintered as safely as any other stock?

In my early experience I had all the troubles in wintering that many are experiencing now, and I tried every place and manner of wintering that looked reasonable, to add to their comfort, and, as a rule, when they came out of winter quarters the loss would be from 30 to 75 per cent. For a long term of years I have wintered bees without loss, and fully 80 per cent. came out as good as when they were placed in winter quarters. If you ask where I winter my bees, my answer would be, in a warm, damp cellar. Why I prefer a warm cellar is because a warm atmosphere is a natural element of the honey-bee; and why I prefer a damp atmosphere is because bees are more quiet and healthier than in a warm, dry atmosphere for so long a time as 170 days without water.

In a warm cellar, where the temperature is from 60° to 90°, there is no discharge from the bees while in the cellar, unless it be in a dry state; and if bees have to be fed for winter, it can be done the last thing before placing them in, and then the bee-keeper knows just what the bees have, and no harm will be done because their feed is not sealed. The hives should be packed in a solid body when kept in a high temperature, and piled one on top of the other, three or four deep, with no upward ventilation. In this way of packing if some of the bees get uneasy and leave their hive, they are quite sure to enter some other hive, and no harm is done.

In wintering in a warm cellar, bees require all the combs that they occupy in the summer, and they will be all over the combs and do not cluster. The cellar must be closed, with no currents of air either hot or cold passing through it to arouse the bees.

It is necessary to have a small ventilator from the top of the room for constant draft; a 3-inch pipe is sufficient for 200 colonies. A fire should be kept in the room above the bees whenever the mercury goes below zero.

Much is said about moisture in hives, and all manner of ways are tried to get rid of it. A warm atmosphere disposes of all moisture that arises from the bees, without any absorbents. Every colony should have plenty of feed to carry them through our longest winters, before they are placed in, so that their owner will have no excuse to go near them until spring. They will use more feed in a warm room than in a cool one.

The time to place bees in the cellar is before cold weather arrives—about the middle of November, as a rule. I use caps taken from the hives for stands to set the brood-chambers on, so that each tier of three or four hives rests on the one cap. The caps should be placed close together, and when all are in they form a floor to the cellar, and yet each stand is separate so that there is no jarring when handling in taking them out. The bottom tier of hives should be raised off the bottom-boards about half an inch at one end of the hive, while all the rest should be left just as they come from the yard, with a good cloth and sound top-board well glued on every hive. When all are in, close the cellar and let them entirely alone until there is something for them to do in the spring. About the time that willow begins to bloom is early enough in my locality.

The above plan of wintering bees is no theory, but is one that is practiced by scores of bee-keepers in Northern New York, and invariably without loss in winter.

I have been as brief as possible in giving my mode of wintering, and will only add further that this plan is given for wintering large lots of bees. Where but few bees are kept where I live, they have no trouble in wintering them in any cellar where vegetables will keep without freezing.

What I claim for this plan of wintering is this: 1. It is the safest plan. 2. It is the cheapest. 3. It requires far less labor than any plan yet recommended.

Mr. C. R. Isham asked if Mr. Barber wintered his bees upon natural stores.

Ira Barber—Yes.

C. R. Isham—Do you leave the pollen in?

Ira Barber—Yes.

J. B. Hall endorsed the views and practices of Mr. Barber from his own experience. He accidentally discovered that bees will winter well in a high temperature. He had 48 colonies in a small bed-room off the kitchen. While he was absent a warm spell came in winter. He feared the loss of his bees. When he came home they were roaring loudly. He gave them up for lost, in his own mind. But they wintered safely, and came out strong in the spring with plenty of brood in the hives.

Martin Emigh—I endorse Mr. Barber's essay, except the dampness.

C. P. Dadant—We have wintered bees in two cellars—one wet, the other dry, and the bees wintered better in the dry one.

Ira Barber—In a damp cellar the temperature must be higher than in a dry cellar. I have wintered bees successfully in a temperature of from 60° to 90°.

Dr. A. B. Mason—I agree with Mr. Barber, except that I would take away the pollen. I do not say that the bees *cannot* be wintered well with pollen in the hives, but if they have no pollen they can have no diarrhea.

C. F. Muth asked if he understood Mr. Hall correctly yesterday, that his honey harvest closed about July 20, and that last year he did not put his bees out until May 2. If so, how did he obtain a sufficient force of bees to get in the honey during so short a harvest?

Mr. Hall replied that the secret lay in the bees being kept so warm that they bred early. He expected his hives to have several combs with brood in them by the time he put them out in the spring. By May 20, there would be not only brood in 6 or 7 combs, but that number full of brood. He could not winter without pollen, because if he did, he would not have his bees bred early enough in the spring to gather in the honey. If they started without brood they would not build up to strong colonies until near winter. He did not agree with Mr. Heddon upon the pollen theory, but must thank him for his surplus case.

James Heddon—I expect to be as successful as Mr. Barber. I think that nothing has been said that disproves the pollen theory. Pollen does not injure bees unless they consume it. Prof. Cook has explained that bees may breed without taking pollen into their intestines. In some instances honey may be free from pollen; in others it is not, and the bees cannot avoid its consumption. I kept bees in a cellar in which the temperature often fell to 20°. Those having natural stores suffered from diarrhea, some perished with it; those having sugar stores were free from it. I will furnish the facts that in many instances one colony has survived and another perished under exactly the same conditions except food. Who will furnish the explanation?

Ira Barber—The higher the temperature, the better my bees have wintered. There is sometimes water in the cellar, and the combs are slightly mouldy.

Mr. Heddon did not consider that the experience of Mr. Barber and Mr. Hall conflicted with the pollen theory, because bees did not necessarily eat pollen when they fed it to larvae. Pollen would not hurt bees in winter, unless they ate it, and if the temperature was right they would not consume pollen.

Adjourned till 2 p.m.

AFTERNOON SESSION.

Ex-President Root called the meeting to order at 2 p.m.

Prof. Cook offered a resolution of respect to the memory of the late

Moses Quinby, of St. Johnsville, N. Y., and announced the contribution of a handsome purse with which to purchase a portrait of the deceased to be presented to his widow. Mr. Quinby was one of the originators of this Society and its second president. This compliment to his memory was exceedingly appropriate and its announcement was enthusiastically received by the convention.

A. I. Root—I must go away in a few minutes, and before I go I desire to say that I have enjoyed this meeting very much. We may not have become rich by producing honey, but this meeting has certainly done much good in uniting the bee-keepers of this country into one band. This convention has "taken the conceit out of me" and has given me a better opinion of my fellow men.

The discussion on wintering bees was resumed by Mr. S. F. Newman, who said—If such gentlemen as Mr. Barber and Mr. Hall meet with no winter losses, I should like to know what becomes of their bees.

Ira Barber—I work against increase and when I get more than I can use, I sell them.

T. Pierce—I have wintered bees for 3 or 4 years, the same as Mr. Barber does, and have been successful. I keep the temperature at from 44° to 50°.

L. C. Root—Do we understand Mr. Barber to say that he has no objection to feeding bees just before putting them into the cellar?

Ira Barber—I do not approve of it, but if I find any that need feeding when putting them in, I feed them. I think that fall honey is just as good for winter stores, provided the temperature is kept high enough. Old bees are just as good as any for wintering.

Jas. Heddon—"Spring dwindling" I call bee-diarrhea in disguise. The bees have had their vitality taxed to the utmost in retaining their feces, and when they begin brood-rearing the strain is too great, and they perish faster than young bees can be reared to replace the dying. When my bees winter well they are not troubled with "spring dwindling." I am not yet certain how much there may be in this pollen theory, and I am yet experimenting.

Rev. W. F. Clarke said there were three matters of great importance to him which had transpired to-day. First, Mr. Hall had explained his method of bee-keeping, and he was much obliged to him for it. Second, Mr. Barber and Mr. Hall had supplied confirmation of the hibernation theory. A year ago he did not understand Mr. Barber's method. Mr. B. said at the Rochester convention that he (Mr. C's) method was a cold system of wintering, and his (Mr. B's) a warm one. This was a mistake. Our systems are alike, only Mr. Barber secured the right temperature in the whole cellar, and I secured it in the single hive. But Mr. Barber's bees quiesce in the fall; if the hive is too full of bees, a cluster will hang outside; they remain in torpor until the breeding instinct awakes, and then they arouse to activity. Third, the pollen theory has got its quietus

from Prof. Cook. He has told us in scientific terms the nature of bee-food, and the process of assimilation. He has maintained that bees cannot breed without pollen, and that they cannot stand work without taking nitrogenous food. If they take that food it must be digested and the feces excreted. Well, Mr. Barber and Mr. Hall have proved that bees breed largely, *i. e.*, work hard, and therefore must eat and digest strong food. The inferences are plain. The bees, if they excrete, do it in dry feces. They must excrete, that is clear. Therefore, there is no danger in having pollen in the hive. On the contrary, it is necessary.

Thomas G. Newman, chairman of the committee on statistics, reported as follows: There were 103 members present, but quite a number had given no report of the past season's operations. Those reported summed up as follows:

Bees.—Colonies last May.... 4,283
Increase..... 3,196

Total now..... 7,479

Honey.—In comb..... lbs, 155,354
Extracted.... " 86,928

Total honey produced, lbs, 242,282

Beeswax produced..... lbs, 2,233

Honey Unsold.—Comb, lbs, 43,275
Extracted.... " 33,425

Total honey unsold, lbs, 76,700

Only about one-third present at the meeting had become members of the Society, and only about one-quarter of those present were included in the statistical report.

The smallest report was: 1 colony last spring, increased to 5, giving 43 pounds of extracted honey.

The largest report was: 470 colonies in May, 740 in the fall. Honey obtained from them 38,000 pounds in comb, and 6,000 pounds of extracted; 125 pounds of beeswax—all having been sold except 2,000 pounds of extracted honey.

All other reports of bees and honey varied between these. It was requested that no statistical table be published—the aggregate amounts being all that will serve the interests of bee-keepers in general.

The report was received and adopted, and the committee discharged.

Mr. D. A. Jones read the following on

DIFFERENT RACES OF BEES.

It is not my purpose to occupy the valuable time of this Convention with a long essay on what has been done in the past in reference to this subject, nor shall I trouble you with a history of the efforts put forth, the trials and hardships endured, and the successes, failures and disappointments connected with the importation of the different races of bees in which I have participated. The object of the majority of the bee-keepers of to-day is to have their capital and labor yield them as good a return as possible, and

the desire is to obtain such a race or strain of bees as will be conducive to that end.

With the above object in view, I shall therefore tell what I have now and what I prefer. I have as yet found none having all the good qualities and being possessed of none of the bad; and none therefore that suit me in every particular. I am not now breeding either Cyprians or Syrians in their purity for my own use, but for experimental purposes and to supply the demand for pure stock. It must not, however, be supposed because of this that they are not without many good qualities; such is not the case.

Different climates have different requirements, as evidenced by the success of Mr. B. F. Carroll, of Texas, with pure Cyprians, and of Mr. A. W. Osburn, in Cuba, with Holy-Land bees or Syrians. I simply assert that they are not so suitable for our climate as are others. After the experience of years I find that for this particular climate, several crosses give far better results than do the races in their purity. This experience is the outcome of experiments conducted on an extensive scale, and with all possible care as to selection and breeding—the latter on isolated islands in the Georgian Bay. Crosses between Italians and Cyprians or Syrians, and between Carniolans and Cyprians or Syrians, seem to give the best results. One-third Cyprian or Syrian is sufficient with two-thirds Italian, or half Carniolan and half Cyprian or Syrian, work well together.

While bees are all crossed the same, the results vary for a time till the strains become more fixed. It is not well to decide because the first cross is of extraordinary value, that you have found just what you are seeking for; in after experience you will find that they seldom duplicate themselves in this respect. These first crosses are too often adopted as the standard, with the impression that breeding from them will always give equally good results. Who knows, unless with proper facilities for breeding, what these crosses are? On the islands of which I have spoken, I have found that at all times I cannot be successful, especially in those particular points that I most desire. Unless the mating of the queen can be better controlled than now, perfection cannot be reached, and the best races or strains of bees produced.

The breeds of horses and other animals over which we have perfect control, are being constantly improved, through persistent efforts which have been going on for hundreds of years; it is not a mere assumption, then, to assert that by crossing, re-crossing, selecting and re-selecting, we certainly make much progress; but these operations will need to be much more carefully conducted than is generally the case, as few, from their surroundings, are enabled to properly prosecute the work. Where pure races best meet the requirements of the climate, it is well to have them in all their purity. Mr. Benton is still engaged in the East in the exportation of queens of

the different races, and his efforts are worthy of proper recognition, and should receive such.

In reply to inquiries, Mr. Jones said—I do not believe that any one living in a Northern climate can profitably produce honey with pure Syrian or Cyprian bees. I prefer Syrians crossed with Italians. The Carniolans do not swarm with us any more than do the Syrians or Cyprians. My advice is, if you have good bees keep them; don't fool away money by sending for new kinds of bees, and paying big prices. We cannot keep queens long enough to test them, and then sell them at a low price. Buy them and test them yourself. In buying queens, buy of a reliable breeder. Carniolans crossed with Italians cannot be distinguished from Italians crossed with blacks. I prefer crosses to pure races.

James Heddon—I must say a word in favor of the blacks; I want their excellent comb-building qualities, and their disposition to keep the honey out of the brood-nest. I have crossed them with the Italians for perhaps 20 generations.

The committee to whom was referred the address of Mr. T. G. Newman on the National Bee-keepers' Union, reported in favor of uniting the two societies. Mr. Heddon, president of the Union, remarked that he did not quite see how it could be done, and the resolution was tabled.

The committee on resolutions reported the following, which were unanimously adopted:

Resolved, That the thanks of this Society be, and are hereby presented to the retiring President, Secretary, and Committee of Arrangements, for their energetic and efficient services in connection with this meeting.

To the railroads by which reduced fares were given to members attending this meeting.

To the proprietors of the Antisdel House for reduced rates, excellent fare, and polite attentions.

To the editors of the various bee-periodicals, also the publishers of the *Prairie Farmer*, for the publication of early and full notices of this meeting.

Resolved, That this Society has felt it an especial privilege and pleasure to have had the presence of the patriarch of American apiculture, in the person of Rev. L. L. Langstroth. It has gratefully appreciated the active part that he has been enabled to take in the discussions at this meeting, and rejoices that still, in his old age, he is enabled to do something for his favorite pursuit. The warm affection and best wishes of all present will hover about him so long as he shall be spared in this life, and his memory will be held dear while honey distils and bees fly.

Resolved, That we appreciate the presence of ladies in larger numbers than ever before, particularizing Mrs. L. Harrison, of the *Prairie Farmer*, and Miss Johnson, of the *Michigan Farmer*.

The committee also recommended the adoption of the following:

Resolved, That a committee of one be appointed to present to the Commissioner of Agriculture our appreciation of his valuable efforts to aid our business in urging the importance of apiarian statistics, and suggest our desires in respect to the chemical examinations which we deem very important to our pursuit.

Resolved, That the thanks of the North American Bee-keepers' Society are due to Prof. C. V. Riley and to the United States government for its action in forming an experimental station for the promotion of apiculture.

Resolved, That we tender the thanks of this Society to the Department of Agriculture in sending to our meeting in Detroit, Prof. McLain, and for the able paper he has presented to us.

Resolved, That we recognize this step of the Department of Agriculture as in the right direction, and bespeak for it your continued support.

Resolved, That we recommend to the Department the making of accurate reports of all data concerning the production of honey, and have them embodied in the usual agricultural reports.

Resolved, That the Secretary of this Society present a copy of these resolutions to Prof. McLain for transmission to the Department of Agriculture.

The above were also adopted.

Prof. Cook, who was about to leave, expressed the great pleasure he had experienced in meeting so many bee-keepers, especially the Eastern friends. Mr. L. C. Root responded, saying that he had hoped great things for this meeting, and he now felt certain that the Society had done wisely in coming to Detroit.

It was voted to hold an evening session, and the meeting adjourned until 7:30 p.m.

EVENING SESSION.

The meeting was called to order at 7:30 p.m., Ex-President Root in the chair.

Mr. Dadant introduced the subject of beeswax, and urged the desirability of inducing the United States Government to take off the protective duty in order that a supply might be obtained from other countries.

D. A. Jones remarked that this had been readily done by the Government of Canada on application, and it was highly probable that the American Government would do the same if asked. One or two members doubted if it was worth the trouble, for all the beeswax that could be got from foreign countries. Much of the beeswax obtained from abroad was very inferior.

C. F. Muth remarked that much of the beeswax offered in this country was very inferior, and went on to speak of several adulterations, some of which were such close imitations of the genuine article as to deceive experienced dealers. The greatest care should be taken to get pure beeswax.

Prof. Cook was appointed "the committee of one" voted in the afternoon to communicate with the Department of Agriculture in regard to obtaining a scientifically-accurate analysis of honey.

D. A. Jones gave his method of queen-rearing as follows: Get a colony very strong, either by adding brood or young bees, then remove the queen and brood, and give the bees eggs from a choice queen. A large number of excellent queens will be the result. Such a colony can build at least 3 lots of cells. Italians are poor cell-builders. Queens reared in this manner lay sooner, and are better developed.

James Heddon—These excellent results may be the result of "contraction," i. e., the bees should be many in proportion to the space.

N. W. McLain—It is amazing to me why breeders pay so much attention to the rearing of queens and so little to the rearing of drones. If such wonderful results have been secured in rearing queens, the same treatment in rearing drones will improve them in the same manner, and it should not be forgotten that prepotency is on the male side. Both the "Pollen Theorists" and Mr. Barber are correct. If the environments are right, the pollen does no harm; if the pollen is not there, no harm will come if the environments are not right.

D. A. Jones—There is a way of "squeezing" bees into the sections by putting the brood-combs close together, and more surplus will thus be secured. I am so thoroughly convinced of the advantage of this that I make all my hives so that the combs are 1½ inches from centre to centre.

T. L. VonDorn—I have used combs only 1½ inches from center to center, and was surprised at the good results.

D. A. Jones—When the honey harvest is coming to a close, I remove ¼ of the combs, and the bees build out the upper part of the combs and fill them with honey; the wide spaces below the honey are excellent places for the bees to cluster.

James Heddon—By using combs far apart, the inducement to building drone-comb is increased.

D. A. Jones—In introducing virgin queens I let them run in at the entrance. Do not disturb the bees. I can introduce laying queens by putting them into a top-feeder and letting them work their way down through the feeder into the hive. In using chloroform for introducing queens it is better to use it at evening or in the morning, when the bees are not flying, as those that came in might kill the queen. If done in the middle of the day, give them another puff or two a few minutes after the queen has run in.

L. C. Root—One of the greatest stumbling-blocks in the way of advancement is the oft-repeated cry, "It is not according to nature." It is not a question of "naturalness," but it is, "All things considered, is it best?"

Mr. Manum stated that he had been very successful in getting colonies with laying workers to accept a queen,

by introducing her with a couple of frames of brood in all stages. This restored the colony to a normal condition.

D. A. Jones said this plan would work with all but pure Cyprians or Syrians, which were incoorrigible.

Ex-President Root then addressed the meeting, summing up some of the interesting features of the present gathering, expressing his satisfaction at the success which had attended the convention, and said that the hour had now come when we must part.

Adjourned *sine die*.

W. Z. HUTCHINSON, Sec.

SELECTIONS FROM OUR LETTER BOX

Nebraska State Bee-Keepers' Association.—W. F. Wright, of Johnson, Co. Nebr., Secretary of the Association, desires to make the following announcement:

The eighth annual meeting of the Nebraska State Bee-Keepers' Association will be held at Lincoln, Nebr., on Jan. 13, 14 and 15, 1886, the first session beginning at 3:30 p.m., on the 13th. Notices will be posted at the Lincoln Depots, directing bee-keepers to the Hall in which the meeting will be held. All are cordially invited to attend. By new arrangements made with the B. & M. and U. P. R. R. Companies, all who wish to attend the Convention must CALL FOR and OBTAIN certificates at their respective depots, and pay full fare to Lincoln. Then, at any time during the sessions present such certificates to me, and I will certify to the same, which will entitle all who hold such certificates, to a return ticket at one-third fare. Do not fail to call for certificates to the Convention when purchasing tickets to Lincoln.

Wintering Bees.—Elias Fox, Hillsborough, Wis., on Dec. 6, 1885, writes:

My method of wintering bees is as follows: I make benches of 2x4 studding, with four legs under each about 10 inches long, and place the hives (which have tight bottoms) on the benches in the cellar, removing the covers, and covering the hives with coffee-sacking. Then I place on either end of the hive, sticks the length of the width of the hive, 1½x1½ inches square, and on these I place the next tier of hives. I also leave the entrances the same as when on the summer stands. I have wintered my bees this way for the last two winters, with good results, notwithstanding the last very severe winter; and they had natural stores with plenty of pollen. I do not claim that I have solved the wintering problem, as some do, who feed their bees wholly on sugar syrup, and advise leaving the hive cover on, but I do say that so far I have been as successful as they, and some of them I do not

believe are nearer perfection now than they were when they commenced experimenting. However, time will tell.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Dec. 21, 1885.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—The market is without special change since last quotations. White comb honey in one-pound sections brings 15¢@16¢. A little fancy sells at 17¢ in a small way. Dark comb honey sells slowly. Nearly all of the white comb honey comes from the East. Extracted is held firmly at 8¢@8c.

BEESWAX.—25¢.

H. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market for comb honey is quite active, and the demand nearly equal to the supply. Prices are gradually shading, owing to the fact of many producers selling their entire crop in this city at very low prices, thereby enabling the purchasers to sell low and realize a handsome profit. Large lots have been sold here at 9¢@10¢ for fancy goods. In consequence of no honey coming in from the West, we can see no reason why good prices should not be obtained, except as above stated. Present quotations are: Fancy white 1-lb. sections, 14¢@15¢; the same in 2-lb. sections, 11¢@12¢; fancy buckwheat honey in 1-lb. sections 11¢@12¢; in 2-lbs., 9¢@10¢. Off grades 1 to 2c. less.

BEESWAX.—Prime yellow, 25¢@26c.

MCCAUL & HILDRETH BROS., 34 Hudson St.

ST. LOUIS.

HONEY.—The market is quiet and the demand light just now. We quote prices as follows:—Choice comb honey, 10¢@12c. Extracted, in barrels, 4¢@5c. Extra fancy of bright color and in 1-lb. packages, ¼ advance on above prices.

D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—There is a very slow demand from manufacturers, for extracted honey, with a large supply on the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4¢@5c a lb. Supply and demand is fair for choice comb honey in small sections, which brings 12¢@15c. per lb.

BEESWAX.—Good yellow is in good demand, and arrivals are fair, at 20¢@22c. per lb.

C. F. MUTH, Freeman & Central Ave.

CLEVELAND.

HONEY.—The market since our last report has improved very much and there is a good opening for very choice white 1-lb. sections, for which 14¢@15c. is obtained. Our stock of new is very light at present but of the old we have a good supply which we sell at 10¢@13c. for white 1-lb. sections. Extracted honey is slow at 6¢@7c. for best white clover and basswood.

BEESWAX.—Very scarce at 20¢@22c.

A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The demand for honey begins to sag under the present comparatively high prices, and recent warm weather, though choice 1-lb. sections are still scarce and pretty well taken up at 10¢@17c. We think, however, that the top is reached and any change will be lower prices. Two-lb. sections are selling at 12¢@15c. Extracted, dark, 4¢@5c.; white, 7¢@8c.

BEESWAX.—22¢@25c.

CLEMENS, CLOON & Co., cor. 4th & Walnut.

BOSTON.

HONEY.—It is selling very well but prices are very low, and we are often obliged to shade our prices in order to make rates. We quote comb honey in 1-lb. sections at 14¢@16c., and 2-lb. sections at 12¢@14c. Extracted, 5¢@6c.

BEESWAX.—30 cts. per lb.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—Choice comb honey is in light supply and is bringing firm figures. There is a fair movement in best qualities of extracted at steady rates. We quote as follows: White to extra white comb, 10¢@12¢; amber, 7¢@8c. Extracted, white liquid, 5¢@5½c.; light amber colored, 4¢@4½c.; amber and candied, 4¢; dark and candied, 4¢@4½c.

BEESWAX.—Quotable at 23¢@25c. wholesale.

O. B. SMITH & Co., 423 Front Street.

Preserve your papers for reference. If you have no **BINDER** we will mail you one for 75 cents, or you can have one **FREE** if you will send us 4 new yearly subscriptions for the BEE JOURNAL.

WEEKLY EDITION
OF THE

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BUSINESS MANAGER.

Special Notices.

SPECIAL NOTICE.—On January 1, 1886, the price of the Weekly BEE JOURNAL will be reduced to *One Dollar a Year*. This we have contemplated for some years, and only awaited the proper time to warrant us in issuing the Weekly BEE JOURNAL at the very low price of *one dollar* a year. That time has now come. We shall continue to improve the BEE JOURNAL, and it will maintain its proud position as the leading bee-paper of the World!

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; but don't stop sending it. I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

Comb Honey Wanted.—We have an opportunity to sell several thousand pounds more of Choice White Comb Honey in 1-lb. sections—on commission. Those who have such for sale are invited to correspond with us—stating particulars, including the price desired.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two new subscribers besides their own, with \$3, for one year, we will present a copy of this valuable book.

Beeswax Wanted.—We are now paying 23 cents per pound for good, average, yellow Beeswax, delivered here. Cash on arrival. Shipments are solicited. The name of the shipper should be put on every package to prevent mistakes.

Local Convention Directory.

1886. *Time and place of Meeting.*
Jan. 8.—Northern Ohio, at Wellington, O.
H. R. Boardman, Sec., E. Townsend, O.
Jan. 12.—Cortland Union, at Cortland, N. Y.
W. H. Beach, Sec., Cortland, N. Y.
Jan. 13—15.—Nebraska State, at Lincoln, Nebr.
W. F. Wright, Sec., Johnson, Nebr.
Jan. 19.—N. W. Ills. & S. W. Wis., at Freeport, Ills.
Jonathan Stewart, Sec., Rock City, Ills.
Jan. 19—21.—Maine, at Skowhegan, Me.
Wm. Hoyt, Sec., Ripley, Me.
Jan. 20, 21.—Indiana State, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.
Jan. 21.—Champlain Valley, at Middlebury, Vt.
R. H. Holmes, Sec., Shoreham, Vt.
Apr. 27.—Des Moines County, at Burlington, Iowa.
Jno. Nau, Sec., Middletown, Iowa.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Convention Notices.

The annual Convention of the Indiana State Bee-Keepers' Society will be held at Indianapolis, Ind., on Jan. 20 and 21, 1886. The meetings of this Society have been very successful in the past, and the coming meeting promises to be still better. The meeting will be held in the rooms of the State Board of Agriculture, and it is one of a series of meetings held by the different Societies of the State, which pertain to the specialties of Agriculture, viz., Dairying, Wool-Growing, Swine-Breeding, Poultry-Raising, etc. Reduced rates are offered at Hotels, and everything possible will be done to make the meeting entertaining and instructive. A very complete program is being prepared, with ample time to discuss the important subjects of particular interest to bee-keepers. A cordial invitation is extended to all bee-keepers, with the hope that they will attend, and thus make the Convention of still greater importance.

FRANK L. DOUGHERTY, Sec.

The annual meeting of the Cortland Union Bee-Keepers' Association will be held in Union Hall at Cortland, N. Y., on Jan. 12, 1886, at 10 a.m. It is hoped that all interested in apiculture will make an extra effort to be in attendance at this meeting. Those unable to attend this meeting are requested to send to the Secretary, reports of their apiaries from May 1, 1885, to Dec. 1, 1885.

W. H. BEACH, Sec., Cortland, N. Y.

The next meeting of the Maine Bee-Keepers' Association will be held at Skowhegan, Me., on Jan. 19, 20 and 21, 1886. The Maine Central R. R. will sell tickets at one fare for the round trip. The Grand Trunk R. R. will sell tickets at the same rate to Lewiston, Me., to all who attend the meeting. Bee-keepers everywhere are cordially invited to be present.

WM. HOYT, Sec.

The Northern Ohio Bee-Keepers' Association will hold a meeting in the Baptist Hall, in Wellington, O., on Friday, Jan. 8, 1886. A special effort will be made to secure a full attendance.

H. R. BOARDMAN, Sec.

The annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Freeport, Ills., on Tuesday, Jan. 19, 1886.

JONATHAN STEWART, Sec.

The annual meeting of the Champlain Valley Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 21, 1886.

R. H. HOLMES, Sec.

Are you Entitled to a pension? You may be and may not know it. If you examine the Guide and Hand-Book you will soon find out. Thousands of things worth knowing will be found in it. The BEE JOURNAL for 1886 and the Guide Book will both be sent for \$1.30.

OUR CLUBBING LIST for 1886.

We supply the **American Bee Journal** for 1886, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

Price of both. Club	
The American Bee Journal	1 00..
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Bee-Keepers' Magazine.....	2 00.. 1 75
Bee-Keepers' Guide.....	1 50.. 1 40
The Apiculturist	2 00.. 1 75
Canadian Bee Journal.....	2 00.. 1 75
Texas Bee Journal	2 00.. 1 75
The 7 above-named papers	6 50.. 5 50
and City and Country.....	2 00.. 1 50
New York Independent	4 00.. 3 30
American Agriculturist	2 50.. 2 25
American Poultry Journal	2 25.. 1 75
and Cook's Manual.....	2 25.. 2 00
Bees and Honey (Newman).....	2 00.. 1 75
Binder for Am. Bee Journal.....	1 75.. 1 60
Apiary Register—100 colonies.....	2 25.. 2 00
Dzierzon's Bee-Book (cloth).....	3 00.. 2 00
Dzierzon's Bee-Book (paper).....	2 50.. 2 00
Quinby's New Bee-Keeping	2 50.. 2 25
Langstroth's Standard Work	3 00.. 2 75
Root's A B C of Bee-Culture.....	2 25.. 2 10
Alley's Queen-Rearing.....	2 50.. 2 25
Farmer's Account Book.....	4 00.. 3 00
Guide and Hand-Book.....	1 50.. 1 30

Advertisements.

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WE are now in the market, and will be during the entire season, for all honey offered us, in any quantity, shape, or condition—just so it is pure. We will sell on commission, charging 5 per cent.; or, if a sample is sent us, we will make the best cash offer the general market will afford. We will handle beeswax the same way, and can furnish bee-men in quantities, crude or refined, at lowest market prices. Mr. Jerome Twichell, our junior member in this department, has full charge, which insures prompt and careful attention in all its details. Sample of comb honey must be a full case, representing a fair average of the lot. On such sample we will make prompt returns, whether we buy or not.

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flowers, which may be called AMBER
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time being, showing what to do, and when and
how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and our Weekly
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